Special Issue

Artificial Intelligence and Digital Twin Technologies for Smart and Sustainable Built Environments

Message from the Guest Editor

This Special Issue aims to bring together pioneering research that leverages AI, machine learning, the Internet of Things (IoT), and cognitive computing to improve the resilience, safety, and sustainability of the built environment. Topics of interest include digital twin development and validation, AI-powered structural health monitoring, multimodal data fusion, autonomous inspection using UAVs and robotics, and intelligent asset management. This issue seeks to advance the convergence of big data analytics, IoT, and cognitive computing toward the realization of next-generation smart cities and sustainable built environments.This Special Issue will serve as a collaborative platform on which researchers and practitioners may share innovations, address current challenges, and shape future directions in AI-driven digital twin and IoT applications for the built environment. We welcome original research articles, comprehensive reviews, and case studies that highlight AI's potential to transform civil infrastructure for a sustainable future.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

Big Data and Cognitive Computing (BDCC) is a scholarly online journal which provides a platform for big data theories with emerging technologies on smart clouds and exploring supercomputers with new cognitive applications. It is a peer-reviewed, open access journal that publishes high quality original articles, reviews and short communications. The primary aims of this journal are to encourage contributions of high quality scientific papers relating to data management and analytics in industry, such as manufacturing, healthcare, education, media and business, data mining, and cognitive science. There is no restriction on the maximum length of the papers.

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